

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

5. Lease Serial No.

UTU-02278

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

UNIT #891008900A

8. Lease Name and Well No.

NBU 1021-23M

9. API Well No.

43-047-39574

10. Field and Pool, or Exploratory

NATURAL BUTTES

11. Sec., T., R., M., or Blk. and Survey or Area

SEC. 23, T10S, R21E

12. County or Parish

UINTAH

13. State

UTAH

1a. Type of Work: ☒ DRILL ☐ REENTER

b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone

2. Name of Operator

KERR MCGEE OIL & GAS ONSHORE LP

3A. Address

1368 SOUTH 1200 EAST VERNAL, UT 84078

3b. Phone No. (include area code)

(435) 781-7024

4. Location of Well (Report location clearly and in accordance with any State requirements.)\*

At surface SW/SW 233'FSL, 552'FWL 6260048 39.926720  
At proposed prod. Zone 44204554 -109.525486

14. Distance in miles and direction from nearest town or post office\*

19.8 +/- MILES SOUTH OF OURAY, UTAH

15. Distance from proposed\*

location to nearest  
property or lease line, ft. 233'  
(Also to nearest drig. unit line, if any)

16. No. of Acres in lease

1040.00

17. Spacing Unit dedicated to this well

40.00

18. Distance from proposed location\*  
to nearest well, drilling, completed,  
applied for, on this lease, ft.

REFER TO  
TOPO C

19. Proposed Depth

9120'

20. BLM/BIA Bond No. on file

BOND NO: WYB000291

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

5324'GL

22. Approximate date work will start\*

23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office.
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the authorized office.

25. Signature

  
Title  
SENIOR LAND ADMIN SPECIALIST

Name (Printed/Typed)

SHEILA UPCHEGO

Date

8/15/2007

Approved by (Signature)

  
Title

Name (Printed/Typed)

BRADLEY G. HILL

Date

08-29-07

Office ENVIRONMENTAL MANAGER

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on reverse)

RECEIVED

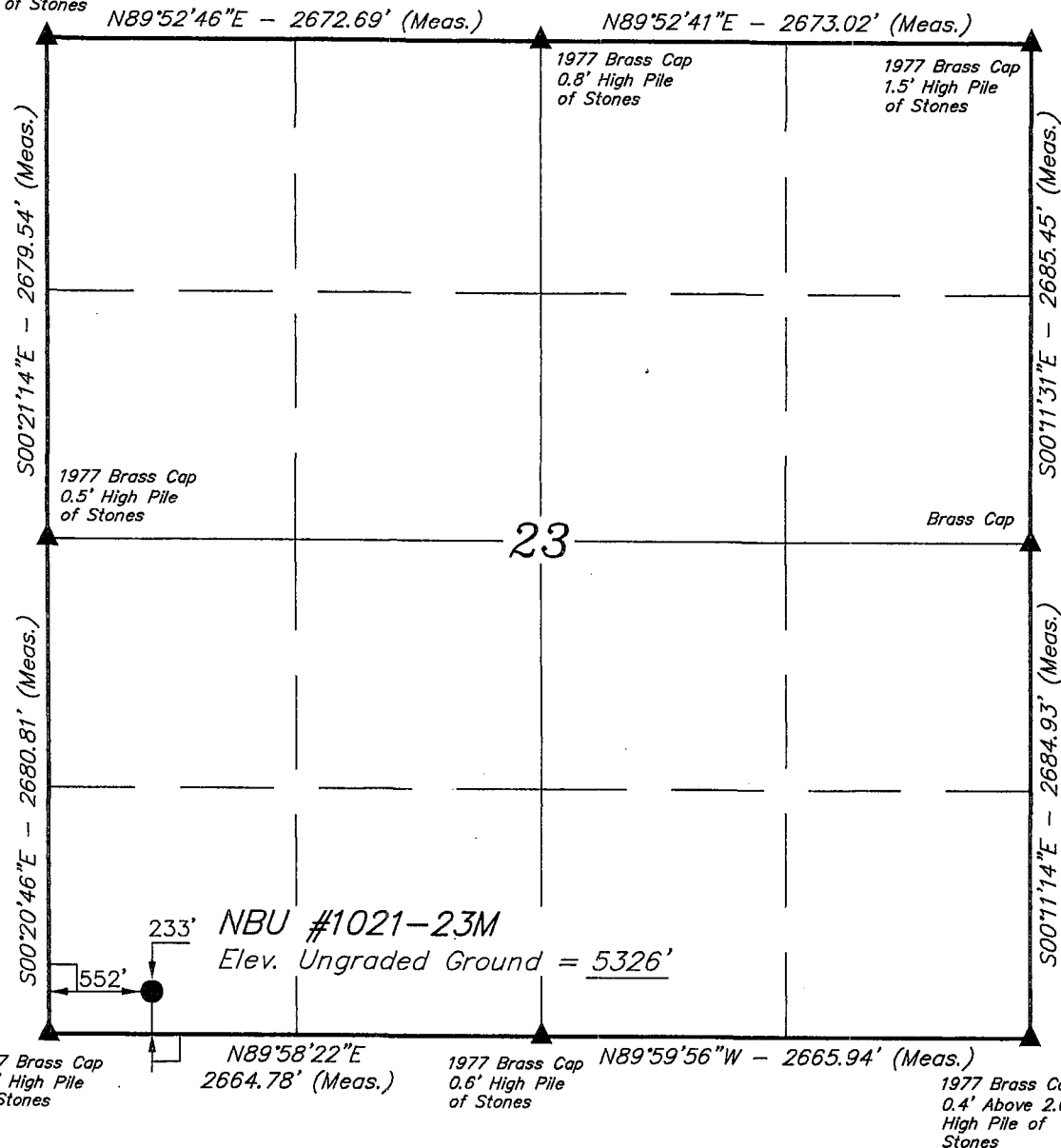
AUG 21 2007

DEPT OF OIL & GAS

Federal Approval of this  
Action is Necessary

# T10S, R21E, S.L.B.&M.

1977 Brass Cap  
Flush W/2.5' High  
Pile of Stones



## LEGEND:

└─┘ = 90° SYMBOL

● = PROPOSED WELL HEAD.

▲ = SECTION CORNERS LOCATED.

(NAD 83)  
LATITUDE = 39°55'36.19" (39.926719)  
LONGITUDE = 109°31'34.38" (109.526217)  
(NAD 27)  
LATITUDE = 39°55'36.31" (39.926753)  
LONGITUDE = 109°31'31.91" (109.525531)

## Kerr McGee Oil & Gas Onshore LP

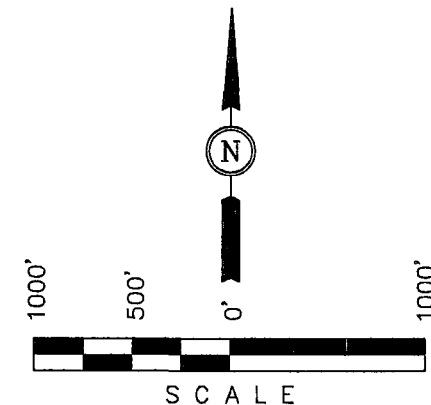
Well location, NBU #1021-23M, located as shown in the SW 1/4 SW 1/4 of Section 23, T10S, R21E, S.L.B.&M. Uintah County, Utah.

## BASIS OF ELEVATION

TWO WATER TRIANGULATION STATION LOCATED IN THE NW 1/4 OF SECTION 1, T10S, R21E, S.L.B.&M. TAKEN FROM THE BIG PACK MTN NE, QUADRANGLE, UTAH, UTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5238 FEET.

## BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



## CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
REGISTRATION NO. 161319  
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING  
85 SOUTH 200 EAST - VERNAL, UTAH 84078  
(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 10-19-06	DATE DRAWN: 10-26-06
PARTY G.O. D.H. C.H.	REFERENCES G.L.O. PLAT	
WEATHER COOL	FILE Kerr McGee Oil & Gas Onshore LP	

**NBU #1021-23M  
SW/SW SEC 23, T10S, R21E  
UINTAH COUNTY, UTAH  
UTU-02278**

**ONSHORE ORDER NO. 1**

***DRILLING PROGRAM***

**1. Estimated Tops of Important Geologic Markers:**

<u>Formation</u>	<u>Depth</u>
Uinta	0- Surface
Green River	1072'
Top of Birds Nest Water	1335'
Mahogany	1924'
Wasatch	4267'
Mesaverde	6977'
MVU2	7945'
MVL1	8495'
TD	9120'

**2. Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
	Green River	1072'
	Top of Birds Nest Water	1335'
	Mahogany	1924'
Gas	Wasatch	4267'
Gas	Mesaverde	6977'
Gas	MVU2	7945'
Gas	MVL1	8495'
Water	N/A	
Other Minerals	N/A	

**3. Pressure Control Equipment (Schematic Attached)**

*Please see the Natural Buttes Unit Standard Operating Procedure (SOP).*

**4. Proposed Casing & Cementing Program:**

*Please see the Natural Buttes Unit SOP.*

**5. Drilling Fluids Program:**

*Please see the Natural Buttes Unit SOP.*

**6. Evaluation Program:**

*Please see the Natural Buttes Unit SOP.*

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 9120' TD, approximately equals 5654 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 3648 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. **Anticipated Starting Dates:**

*Drilling is planned to commence immediately upon approval of this application.*

9. **Variances:**

*Please see Natural Buttes Unit SOP.*

10. **Other Information:**

*Please see Natural Buttes Unit SOP.*



# KERR-McGEE OIL & GAS ONSHORE LP **DRILLING PROGRAM**

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP DATE August 15, 2007  
WELL NAME NBU 1021-23M TD 9,120' MD/TVD  
FIELD Natural Buttes COUNTY Uintah STATE Utah ELEVATION 5,326' GL KB 5,341'  
SURFACE LOCATION SW/SW SEC. 23, T10S, R21E 233'FSL, 552'FWL BHL Straight Hole  
Latitude: 39.926719 Longitude: 109.526217  
OBJECTIVE ZONE(S) Wasatch/Mesaverde  
ADDITIONAL INFO Regulatory Agencies: BLM (SURF & MINERALS), UDOGM, Tri-County Health Dept.

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
			12-1/4"	9-5/8", 32.3#, H-40, STC	Air mist
Catch water sample, if possible, from 0 to 4,267'					
	Green River @	1,072'			
	Top of Birds Nest Water @	1335'			
	Preset f/ GL @				
	1,900' MD				
Note: 12.25" surface hole will usually be drilled ±400' below the bottom of lost circulation zone. Drilled depth may be ±200' of the estimated set depth depending on the actual depth of the loss zone.					
	Mahogany @	1,924'			
Mud logging program TBD					
Open hole logging program f/ TD - surf csg					
	Wasatch @	4,267'			
	Mverde @	6,977'			
	MVU2 @	7,945'			
	MVL1 @	8,495'			
			7-7/8"	4-1/2", 11.6#, I-80 or equivalent LTC casing	Water/Fresh Water Mud 8.3-11.5 ppg ~
					Max anticipated Mud required 11.5 ppg
	TD @	9,120'			



# **KERR-McGEE OIL & GAS ONSHORE LP** **DRILLING PROGRAM**

## **CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						
						2270	1370	254000
SURFACE	9-5/8"	0 to 1900	32.30	H-40	STC	0.66*****	1.54	4.73
						7780	6350	201000
PRODUCTION	4-1/2"	0 to 9120	11.60	I-80	LTC	2.26	1.16	2.18

- 1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point)  
2) MASP (Prod Casing) = Pore Pressure at TD - (.22 psi/ft-partial evac gradient x TD)  
(Burst Assumptions: TD = 11.5 ppg) .22 psi/ft = gradient for partially evac wellbore  
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)  
MASP 3447 psi  
\*\*\*\*\* Burst SF is low but csg is much stronger than formation at 2000'. EMW @ 2000' for 2270# is 21.8 ppg or 1.13 psi/ft

## **CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE Option 1	LEAD	500	Premium cmt + 2% CaCl + .25 pps flocele	215	60%	15.60	1.18
	TOP OUT CMT (1)	200	20 gals sodium silicate + Premium cmt + 2% CaCl + .25 pps flocele	50		15.60	1.18
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE Option 2	LEAD	1500	NOTE: If well will circulate water to surface, option 2 will be utilized Prem cmt + 16% Gel + 10 pps gilsonite + .25 pps Flocele + 3% salt BWOC	170	35%	11.00	3.82
	TAIL	500	Premium cmt + 2% CaCl + .25 pps flocele	180	35%	15.60	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	3,760'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	410	60%	11.00	3.38
	TAIL	5,360'	50/50 Poz/G + 10% salt + 2% gel +.1% R-3	1500	60%	14.30	1.31

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained  
\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

## **FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.

## **ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out. Record on chart recorder & tour sheet. Function test rams on each trip. Maintain safety valve & inside BOP on rig floor at all times. Kelly to be equipped with upper & lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

Brad Laney

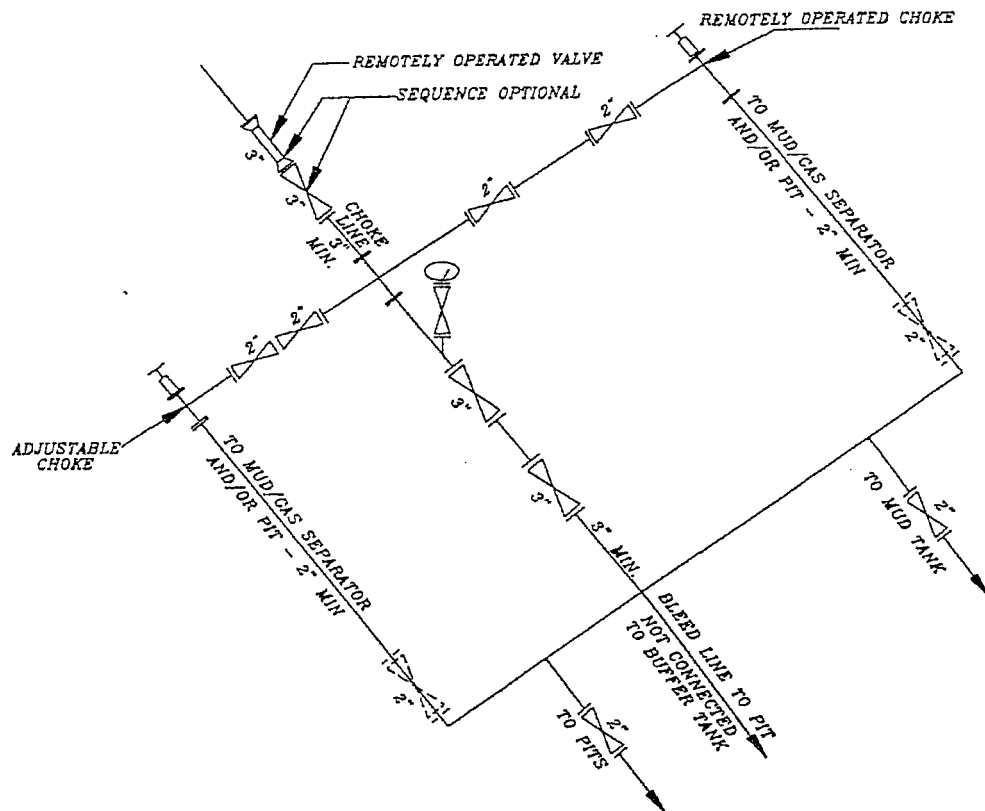
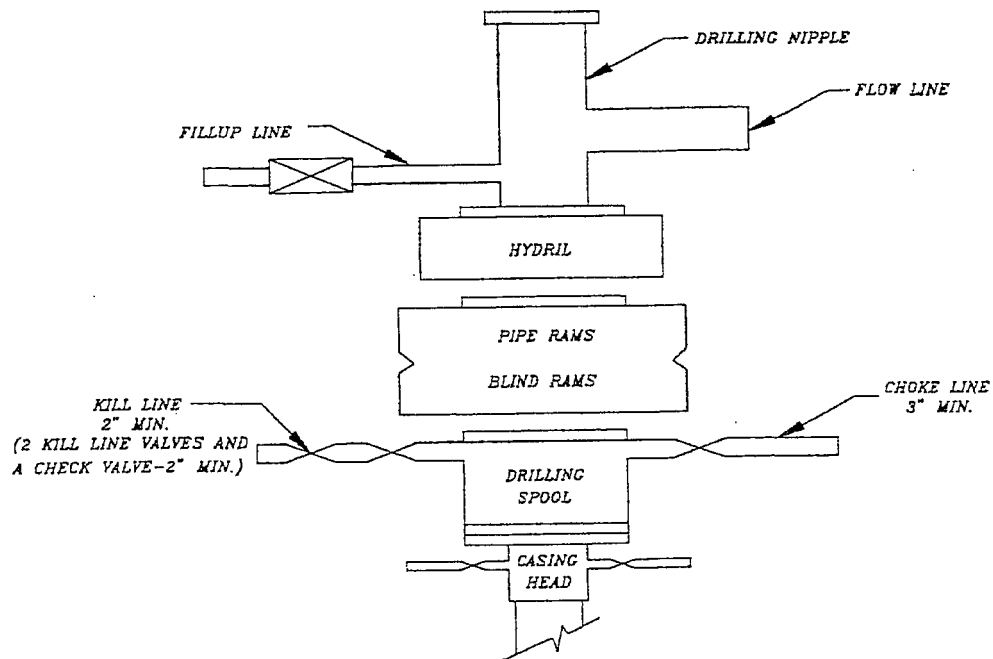
DATE:

DRILLING SUPERINTENDENT:

Randy Bayne

DATE:

# 5M BOP STACK and CHOKE MANIFOLD SYSTEM



**NBU #1021-23M  
SW/SW SEC 23, T10S, R21E  
UINTAH COUNTY, UTAH  
UTU-02278**

**ONSHORE ORDER NO. 1**

***MULTI-POINT SURFACE USE & OPERATIONS PLAN***

**1. Existing Roads:**

Refer to the attached location directions.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

**2. Planned Access Roads:**

*Please see the Natural Buttes Unit Standard Operating Procedure (SOP).*

A rights-of-way will be required approximately 0.9 +/- miles of access road is proposed. from an existing access road in Sec. 26, T10S, R21E (Lease #UTU-0129384) to the proposed access road. Please refer to the attached Topo Map B.

**3. Location of Existing Wells Within a 1-Mile Radius:**

Please refer to Topo Map C.

**4. Location of Existing & Proposed Facilities:**

*Please see the Natural Buttes Unit SOP.*

A 30' rights-of-way will be required approximately 4582' +/- of 4" steel pipeline is from an existing pipeline in Sec. 26, T10S, R21E (Lease #UTU-0129384) to the proposed pipeline. Please refer to the attached Please refer to Topo Map D

**Variances to Best Management Practices (BMPs) Requested:**

The pipeline shall be installed on surface within the access corridor for the well location. As a Best Management Practice (BMP), the pipeline would be buried within the access road corridor if possible. The construction of pipelines requires the corridor of 30 feet.

This exception to the BMP should be granted by the BLM Authorized Officer because indurated bedrock, such as sandstone, is at or within 2 feet of the surface and the soil has a poor history for successful rehabilitation.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The requested color is Carlsbad Canyon Brown (2.5Y 6/2), a non-reflective earthtone.

**5. Location and Type of Water Supply:**

*Please see the Natural Buttes SOP.*



6. **Source of Construction Materials:**

*Please see the Natural Buttes SOP.*

7. **Methods of Handling Waste Materials:**

*Please see the Natural Buttes SOP.*

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites: RNI, Sec. 5, T9S, R22E, NBU #159, Sec. 35, T9S R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E (*Request is in lieu of filing Form 3160-5, after initial production*).

8. **Ancillary Facilities:**

*Please see the Natural Buttes SOP.*

9. **Well Site Layout:** (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

A 20 mil reserve pit liner with felt will be used. As discussed at the on-site inspection.

Location size may change prior to the drilling of the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling rig. The location will be re-surveyed and a form 3160-5 will be submitted.

10. **Plans for Reclamation of the Surface:**

*Please see the Natural Buttes SOP.*

When the pit is backfilled, the topsoil pile shall be spread on the location up to the rig anchor points. The location will be reshaped to the original contour to the extent possible. The following seed mixture will be used to reclaim the surface for interim reclamation using appropriate reclamation methods. A total of 12 lbs/acre will be used if the seeds are drilled (24 lbs/acre if the seeds are broadcast). The per acre requirements for **drilled** seed are:

Gardnier Saltbrush	8 lbs.
Galleta Grass	4 lbs.
Shadscale	4 lbs

Operator shall call the BLM for the seed mixture when final reclamation occurs.

**11. Surface Ownership:**

The well pad and access road are located on lands owned by:

United States of America  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078  
(435)781-4400

**12. Other Information:**

A Class III Archaeological Survey Report, has been performed and will be submitted when report becomes available.

The paleontological survey have been performed and will be submitted when report becomes available.

This location is not within 460' from the boundary of the Natural Buttes Unit, nor is it within 460' of any non-committed tract lying with the boundaries of the unit.

**13. Lessee's or Operator's Representative & Certification:**

Sheila Ucphego  
Senior Land Admin Specialist  
Kerr-McGee Oil & Gas Onshore LP  
1368 South 1200 East  
Vernal, UT 84078  
(435) 781-7024

Randy Bayne  
Drilling Manager  
Kerr-McGee Oil & Gas Onshore LP  
1368 South 1200 East  
Vernal, UT 84078  
(435) 781-7018

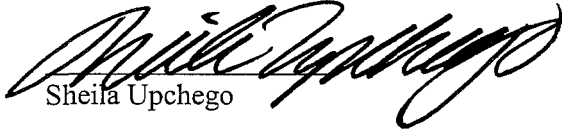
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under the terms and conditions of the lease for the operations conducted upon leased lands.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by BLM Nationwide Bond #WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by the Operator, its contractors, and subcontractors in conformity with this plan and the terms and conditions under which it is approved.



Sheila Upchego

8/15/2007

Date

# Kerr-McGee Oil & Gas Onshore LP

NBU #1021-23M

SECTION 23, T10S, R21E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; TURN LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 11.2 MILES ON THE SEEP RIDGE ROAD TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 6.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 1.1 MILES TO THE BEGINNING OF THE PROPOSED ACCESS TO THE NORTHWEST; FOLLOW ROAD FLAGS IN A NORTHWESTERLY DIRECTION APPROXIMATELY 0.9 MILES TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 50.8 MILES.

# Kerr-McGee Oil & Gas Onshore LP

NBU #1021-23M

LOCATED IN UTAH COUNTY, UTAH  
SECTION 23, T10S, R21E, S.L.B.&M.

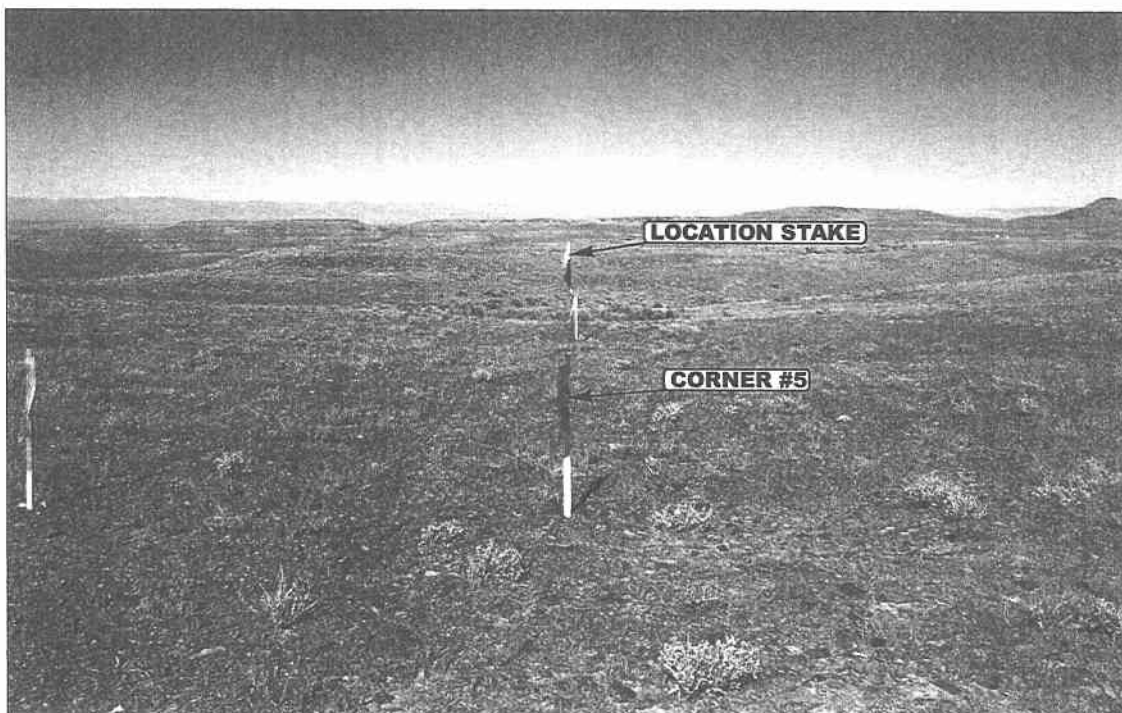


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: NORTHWESTERLY



- Since 1964 -

**UELS** Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS

10 26 06  
MONTH DAY YEAR

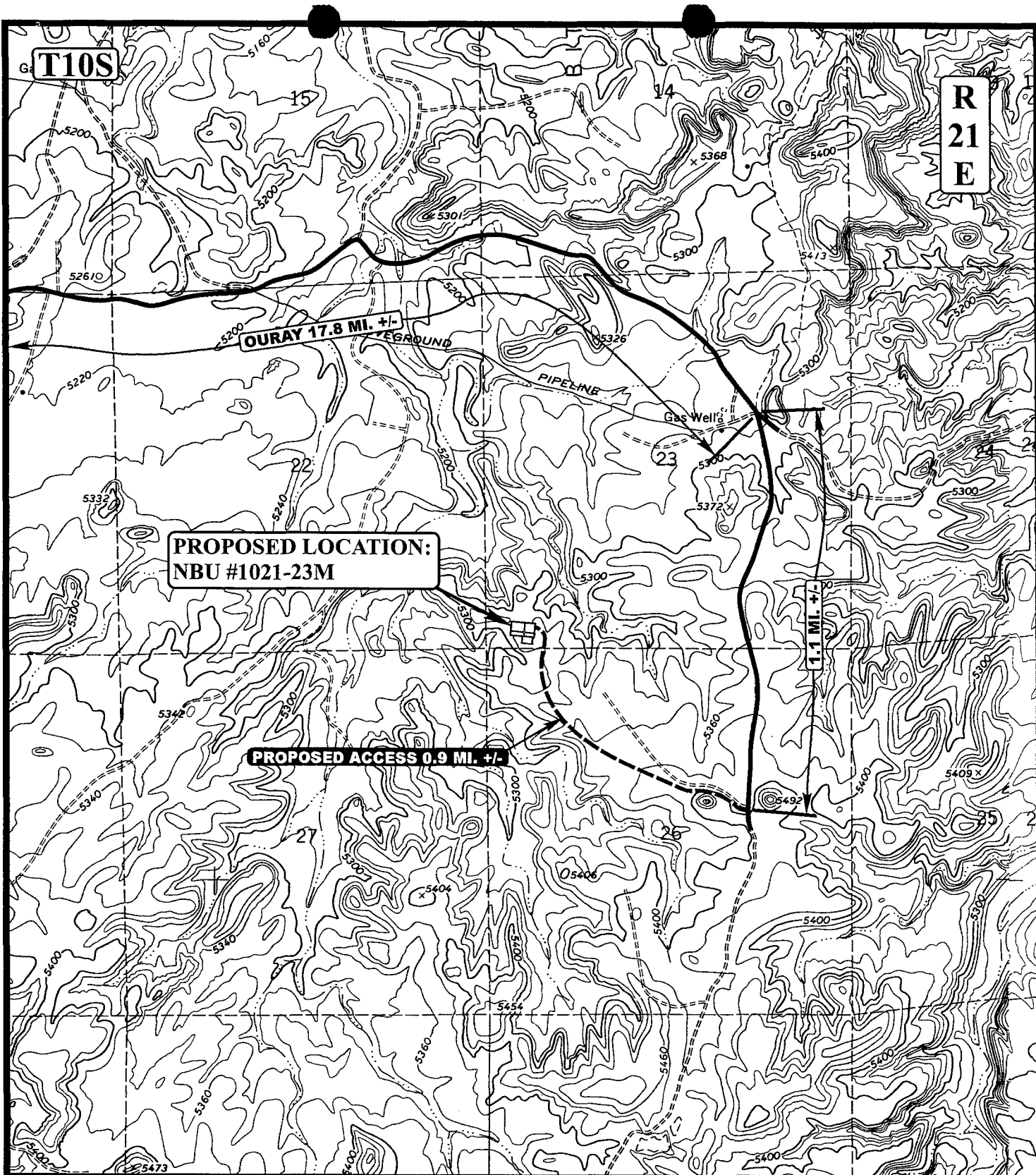
PHOTO

TAKEN BY: G.O.

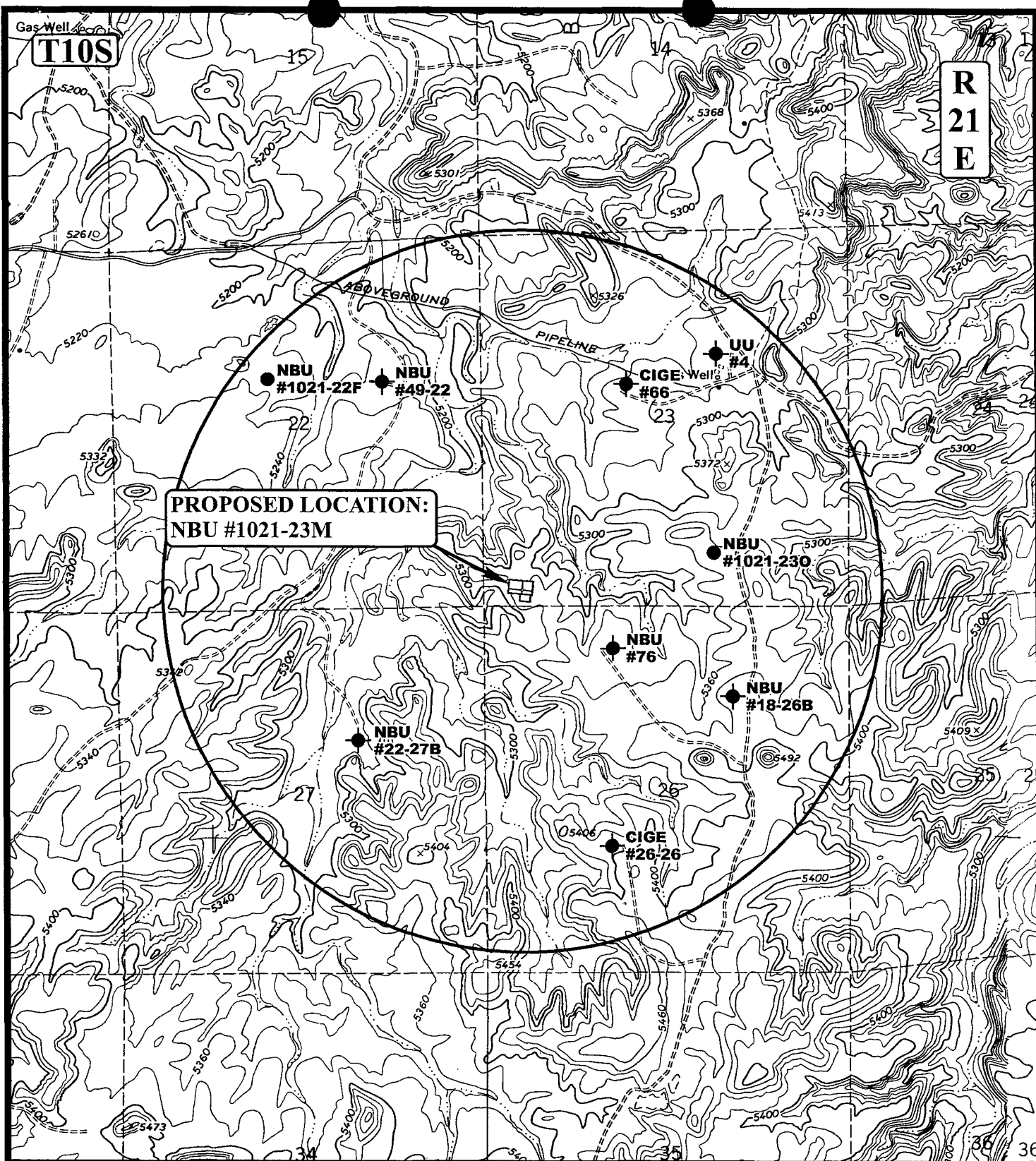
DRAWN BY: C.P.

REVISED: 00-00-00









# LEGEND:

- |                   |                         |
|-------------------|-------------------------|
| ○ DISPOSAL WELLS  | ○ WATER WELLS           |
| ● PRODUCING WELLS | ● ABANDONED WELLS       |
| ● SHUT IN WELLS   | ● TEMPORARILY ABANDONED |

N



Kerr-McGee Oil & Gas Onshore LP

NBU #1021-23M

SECTION 23, T10S, R21E, S.L.B.&M.

233' FSL 552' FWL



Utah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

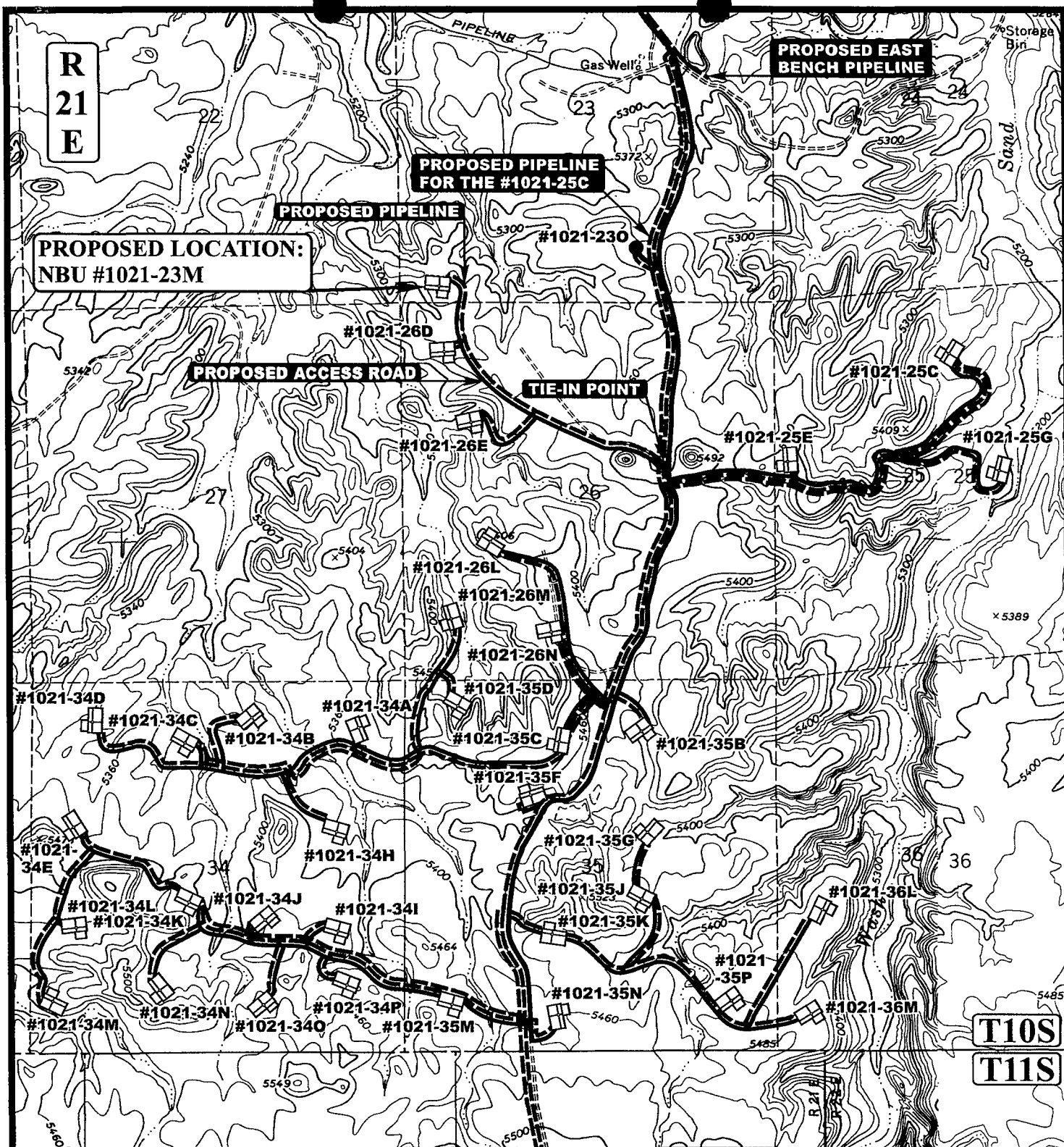
TOPOGRAPHIC  
MAP

10	26	06
MONTH	DAY	YEAR

SCALE: 1" = 2000' DRAWN BY: C.P. REVISED: 00-00-00

C  
TOPO





APPROXIMATE TOTAL PIPELINE DISTANCE = 4,582' +/-

# LEGEND:

- PROPOSED ACCESS ROAD
- EXISTING PIPELINE
- PROPOSED PIPELINE
- PROPOSED PIPELINE (SERVICING OTHER WELLS)

N

Kerr-McGee Oil & Gas Onshore LP

NBU #1021-23M

SECTION 23, T10S, R21E, S.L.B.&M.

233' FSL 552' FWL



Utah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

TOPOGRAPHIC  
MAP

10 26 06  
MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: C.P. REVISED: 00-00-00



# Kerr-McGee Oil & Gas Onshore LP

NBU #1021-23M

PIPELINE ALIGNMENT

LOCATED IN UINTAH COUNTY, UTAH

SECTION 23, T10S, R21E, S.L.B.&M.



PHOTO: VIEW FROM TIE-IN POINT

CAMERA ANGLE: NORTHEASTERLY

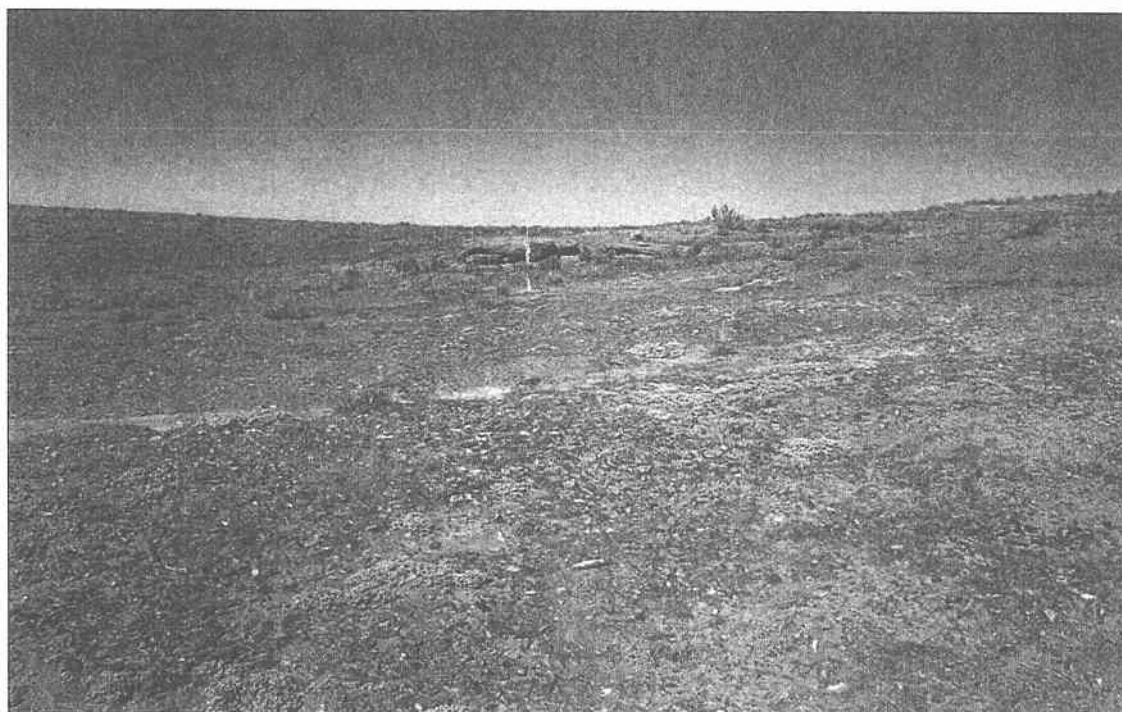


PHOTO: VIEW OF PIPELINE ALIGNMENT

CAMERA ANGLE: NORTHEASTERLY



- Since 1964 -

**UELS** Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
435-789-1017 uels@uelsinc.com

PIPELINE PHOTOS

10 26 06  
MONTH DAY YEAR

PHOTO

TAKEN BY: G.O.

DRAWN BY: C.P.

REVISED: 00-00-00

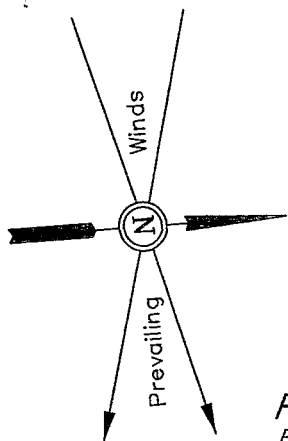
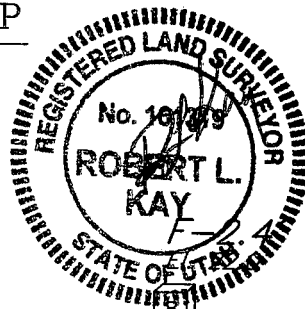
# Kerr-McGee Oil & Gas Onshore LP

LOCATION LAYOUT FOR

NBU #1021-23M

SECTION 23, T10S, R21E, S.L.B.&M.

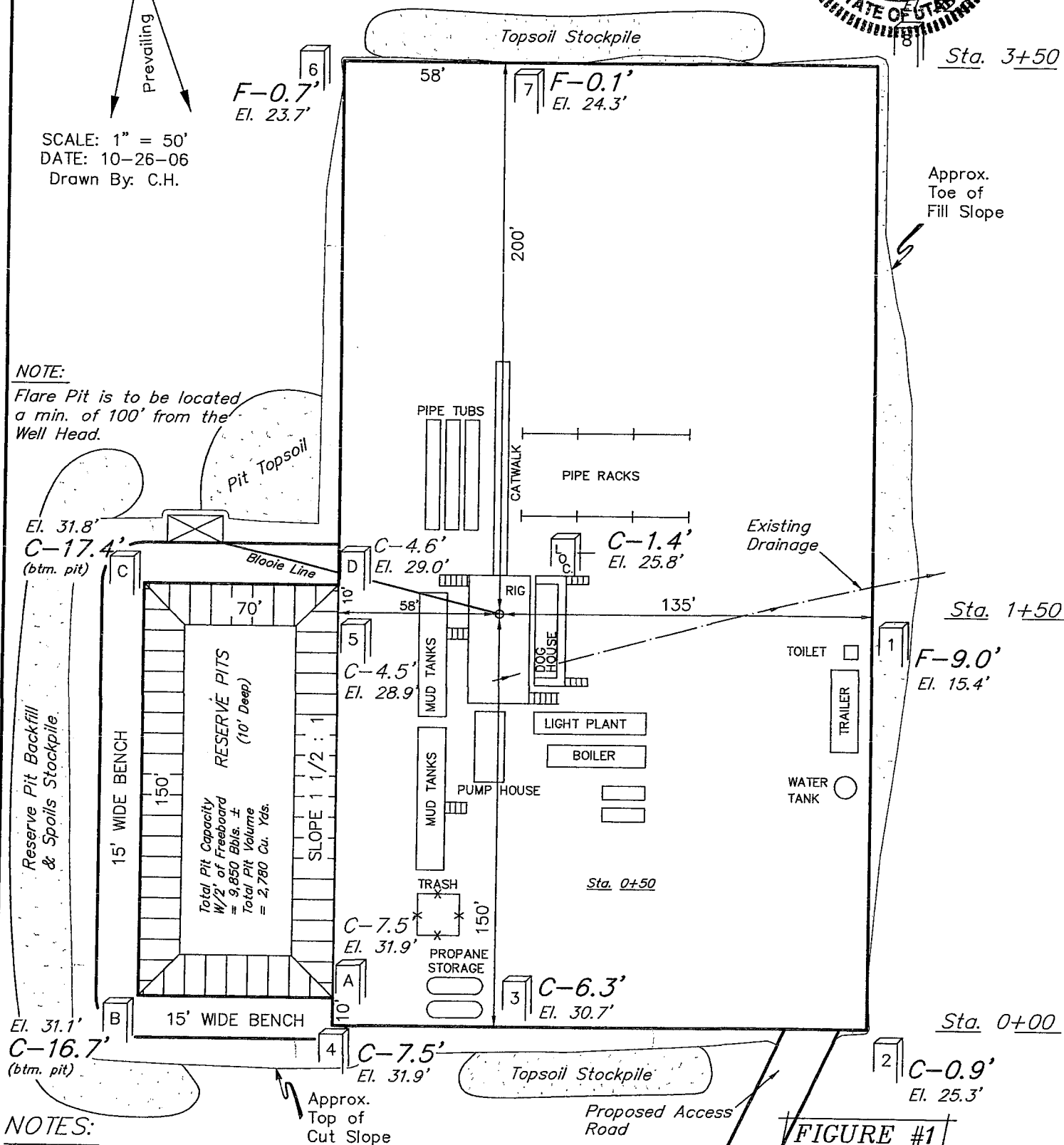
233' FSL 552' FWL



SCALE: 1" = 50'  
DATE: 10-26-06  
Drawn By: C.H.

## NOTE:

Flare Pit is to be located  
a min. of 100' from the  
Well Head.



## NOTES:

Elev. Ungraded Ground At Loc. Stake = 5325.8'

FINISHED GRADE ELEV. AT LOC. STAKE = 5324.4'

FIGURE #1

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

# Kerr-McGee Oil & Gas Onshore LP

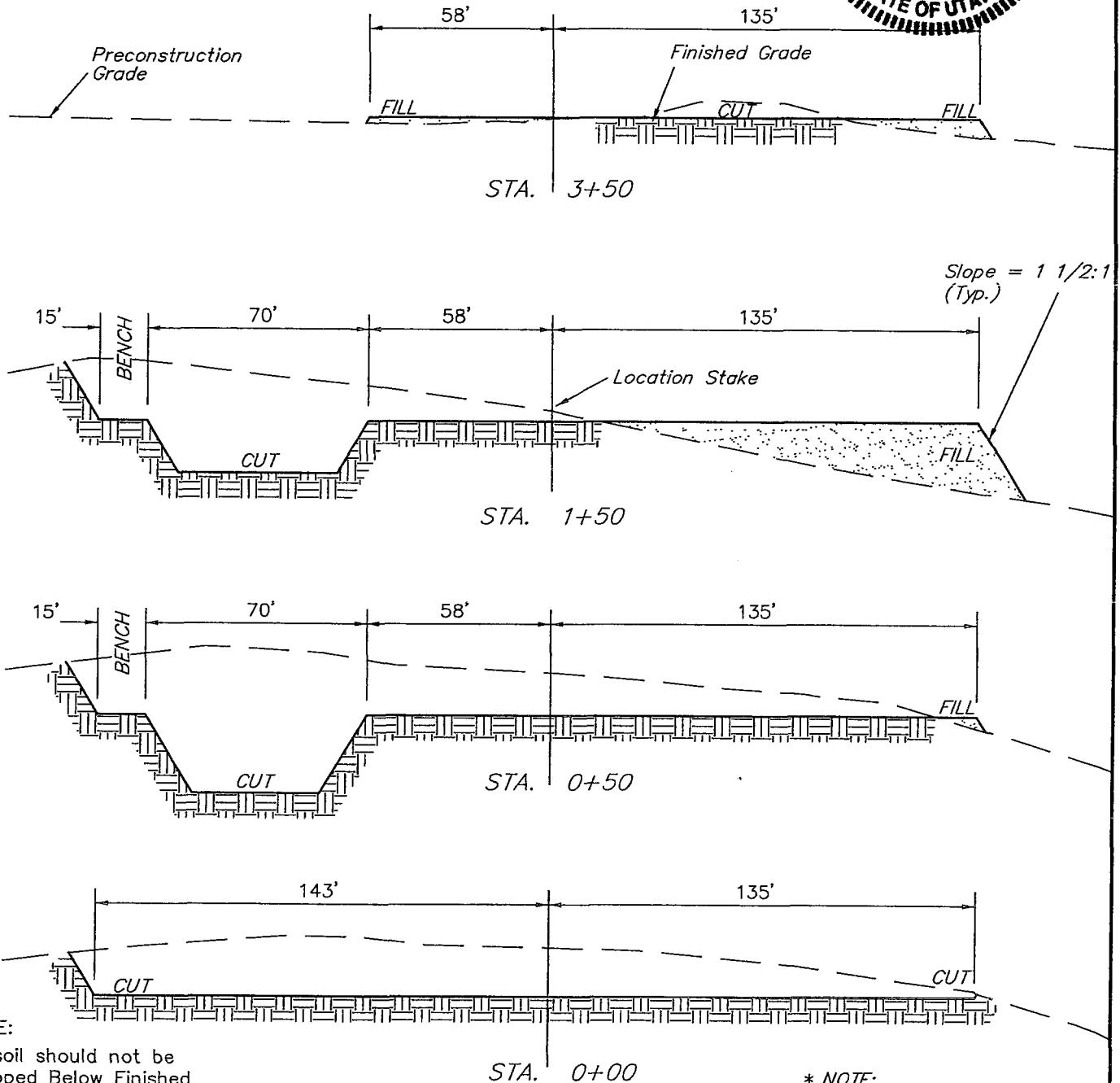
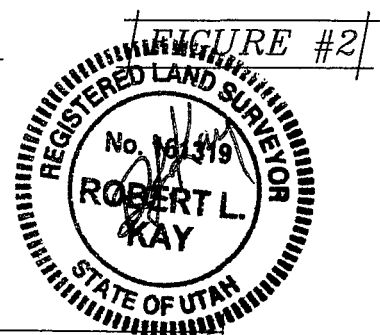
## TYPICAL CROSS SECTIONS FOR

NBU #1021-23M

SECTION 23, T10S, R21E, S.L.B.&M.

233' FSL 552' FWL

1" = 20'  
X-Section  
Scale  
1" = 50'  
DATE: 10-26-06  
Drawn By: C.H.



### NOTE:

Topsoil should not be Stripped Below Finished Grade on Substructure Area.

### \* NOTE:

FILL QUANTITY INCLUDES 5% FOR COMPACTION

### APPROXIMATE YARDAGES

CUT  
(6") Topsoil Stripping = 1,750 Cu. Yds.  
Remaining Location = 10,800 Cu. Yds.  
TOTAL CUT = 12,550 CU.YDS.  
FILL = 3,760 CU.YDS.

EXCESS MATERIAL = 8,790 Cu. Yds.  
Topsoil & Pit Backfill = 3,140 Cu. Yds.  
(1/2 Pit Vol.)  
EXCESS UNBALANCE = 5,650 Cu. Yds.  
(After Interim Rehabilitation)

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

**WORKSHEET**  
**APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 08/21/2007

API NO. ASSIGNED: 43-047-39574

WELL NAME: NBU 1021-23M

OPERATOR: KERR-MCGEE OIL & GAS ( N2995 )

PHONE NUMBER: 435-781-7024

CONTACT: SHEILA UPCHEGO

PROPOSED LOCATION:

SWSW 23 100S 210E

SURFACE: 0233 FSL 0552 FWL

BOTTOM: 0233 FSL 0552 FWL

COUNTY: Uintah

LATITUDE: 39.92672 LONGITUDE: -109.5255

UTM SURF EASTINGS: 626004 NORTHINGS: 4420455

FIELD NAME: NATURAL BUTTES ( 630 )

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-02278

SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: WSMVD

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

☒ Plat  
☒ Bond: Fed[1] Ind[] Sta[] Fee[]  
(No. WYB000291 )  
☒ Potash (Y/N)  
☒ Oil Shale 190-5 (B) or 190-3 or 190-13  
☒ Water Permit  
(No. 43-8496 )  
☒ RDCC Review (Y/N)  
(Date: )  
☒ Fee Surf Agreement (Y/N)  
☒ Intent to Commingle (Y/N)

LOCATION AND SITING:

☐ R649-2-3.  
Unit: NATURAL BUTTES  
☐ R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells  
☐ R649-3-3. Exception  
☒ Drilling Unit  
Board Cause No: 173-14  
Eff Date: 12-2-94  
Siting: 460' fr Ubdrg & unComm. Tract  
☐ R649-3-11. Directional Drill

COMMENTS:

*See Separate File*

STIPULATIONS:

*1- Federal Approval  
2- On Shale*





# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160

(UT-922)

August 29, 2007

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2007 Plan of Development Natural Buttes Unit  
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2007 within the Natural Buttes Unit, Uintah County, Utah.

API#	WELL NAME	LOCATION
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(Proposed PZ Wasatch/MesaVerde)

43-047-39540	NBU 922-30L-T	Sec 30 T09S R22E 2106 FSL 0817 FWL
43-047-39542	NBU 1021-14B	Sec 14 T10S R21E 0439 FNL 2355 FEL
43-047-39543	NBU 1021-14F	Sec 14 T10S R21E 2404 FNL 2387 FWL
43-047-39544	NBU 1021-150	Sec 15 T10S R21E 1127 FSL 2304 FEL
43-047-39545	NBU 1021-15K	Sec 15 T10S R21E 2277 FSL 2041 FWL
43-047-39546	NBU 1021-15L	Sec 15 T10S R21E 2188 FSL 0783 FWL
43-047-39547	NBU 1021-15F	Sec 15 T10S R21E 2164 FNL 1915 FWL
43-047-39548	NBU 1021-15J	Sec 15 T10S R21E 2361 FSL 2372 FEL
43-047-39563	NBU 1021-15P	Sec 15 T10S R21E 1214 FSL 1262 FEL
43-047-39564	NBU 1021-22C	Sec 22 T10S R21E 0902 FNL 2194 FWL
43-047-39549	NBU 1021-22K	Sec 22 T10S R21E 2088 FSL 2006 FWL
43-047-39550	NBU 1021-22A	Sec 22 T10S R21E 0668 FNL 0469 FEL
43-047-39551	NBU 1021-22L	Sec 22 T10S R21E 2114 FSL 0725 FWL
43-047-39565	NBU 1021-22D	Sec 22 T10S R21E 0769 FNL 0641 FWL
43-047-39566	NBU 1021-22E	Sec 22 T10S R21E 2000 FNL 0860 FWL
43-047-39567	NBU 1021-23E	Sec 23 T10S R21E 2201 FNL 0846 FWL
43-047-39569	NBU 1021-23B	Sec 23 T10S R21E 0175 FNL 2391 FEL
43-047-39557	NBU 1021-23K	Sec 23 T10S R21E 2021 FSL 2152 FWL
43-047-39558	NBU 1021-23N	Sec 23 T10S R21E 0699 FSL 2196 FWL
43-047-39559	NBU 1021-23D	Sec 23 T10S R21E 0065 FNL 0460 FWL
43-047-39560	NBU 1021-23L	Sec 23 T10S R21E 2126 FSL 1227 FWL

43-047-39570	NBU	1021-23C	Sec	23	T10S	R21E	0567	FSL	2203	FWL
43-047-39572	NBU	1021-23J	Sec	23	T10S	R21E	1906	FSL	2167	FEL
✓43-047-39574	NBU	1021-23M	Sec	23	T10S	R21E	0233	FSL	0552	FWL
43-047-39575	NBU	1021-25J	Sec	25	T10S	R21E	1621	FSL	1890	FEL
43-047-39561	NBU	1021-25K	Sec	25	T10S	R21E	1848	FSL	2394	FWL
43-047-39579	NBU	1021-26E	Sec	26	T10S	R21E	1706	FNL	0992	FWL
43-047-39580	NBU	1021-26D	Sec	26	T10S	R21E	0695	FNL	0614	FWL
43-047-39578	NBU	1021-25F	Sec	25	T10S	R21E	2477	FNL	2323	FWL
43-047-39541	NBU	1021-3I	Sec	03	T10S	R21E	1371	FSL	1121	FEL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit  
Division of Oil Gas and Mining  
Central Files  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:8-29-07





JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil Gas and Mining

JOHN R. BAZA  
Division Director

August 29, 2007

Kerr-McGee Oil & Gas Onshore LP  
1368 South 1200 East  
Vernal, Ut 84078

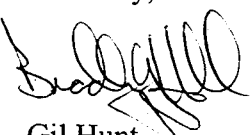
Re: NBU 1021-23M Well, 233' FSL, 552' FWL, SW SW, Sec. 23, T. 10 South, R. 21 East,  
Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-39574.

Sincerely,

  
for Gil Hunt  
Associate Director

pab  
Enclosures

cc: Uintah County Assessor  
Bureau of Land Management, Vernal Office

Operator: Kerr-McGee Oil & Gas Onshore LP

Well Name & Number NBU 1021-23M

API Number: 43-047-39574

Lease: UTU-02278

Location: SW SW                      Sec. 23              T. 10 South                      R. 21 East

### Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dustin Doucet at (801) 538-5281 office      (801) 733-0983 home

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

5. In accordance with Order in Cause No. 190-5(b) dated October 28, 1982, the Operator shall comply with requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operator shall ensure that the surface and/or production casing is properly cemented over the entire oil shale interval as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the Division.



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Vernal Field Office  
170 South 500 East  
Vernal, UT 84078  
(435) 781-4400 Fax: (435) 781-4410



IN REPLY REFER TO:

3160  
UT08300

February 25, 2008

435-781-39574

Raleen White  
Kerr McGee Oil & Gas Onshore LP  
1368 South 1200 East  
Vernal, UT 84078

Re: Well No. NBU 1021-23M  
SWSW, Sec. 23, T10S, R21E  
Uintah County, Utah  
Lease No. UTU-02278-A  
Natural Buttes Unit

Dear Ms. White:

The Application for Permit to Drill (APD) the above referenced well submitted August 16, 2007, is being returned unapproved per your request to this office in an email message to Natural Resource Specialist Verlyn Pindell on February 13, 2008. If you intend to drill at this location at a future date, a new APD must be submitted.

If you have any questions regarding this matter, please contact me at (435) 781-4455.

Sincerely,

*Cindy Severson*

Cindy Severson  
Land Law Examiner

Enclosures

cc: UDOGM – Diana Mason

RECEIVED

MAR 10 2008

DIV. OF OIL, GAS & MINING



JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil Gas and Mining

JOHN R. BAZA  
Division Director

March 11, 2008

Raleen White  
Kerr McGee O&G Onshore LP  
1368 South 1200 East  
Vernal UT 84078

NBU 1021-23M  
43 047 39574  
10S 21E 23

Re: APDs Rescinded at the request of Kerr-McGee O&G Onshore LP


Dear Ms. White:

Enclosed find the list of APDs that you requested to be rescinded to Kerr-McGee O&G Onshore LP. No drilling activity at these locations has been reported to the division. Therefore, approval to drill these wells is hereby rescinded, effective March 10, 2008.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject locations.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

  
Diana Mason  
Environmental Scientist

cc: Well File  
Bureau of Land Management, Vernal

Federal 920-35M  
Federal 1021-34L  
Federal 1021-34O  
Federal 1021-23I  
Federal 1021-23H  
NBU 1021-3I  
NBU 1021-6E  
NBU 1021-5MT  
NBU 1021-12M  
NBU 1021-12K  
NBU 1021-11J  
NBU 1021-11N  
NBU 1021-11O  
NBU 1021-14B  
NBU 1021-14F  
NBU 1021-15J  
NBU 1021-15K  
NBU 1021-15O  
NBU 1021-23C  
NBU 1021-23D  
NBU 1021-23E  
NBU 1021-23B  
NBU 1021-23J  
NBU 1021-23K  
NBU 1021-23N  
NBU 1021-23M  
NBU 1021-22E  
NBU 1021-22C  
NBU 1021-22L  
NBU 1021-22K  
NBU 1021-22D  
LOVE UNIT 1122-18F  
LOVE UNIT 1122-18O  
LOVE UNIT 1122-18N  
LOVE UNIT 1122-19F  
LOVE UNIT 1122-15J  
LOVE 1121-2B  
LOVE 1121-7J  
LOVE 1121-14J  
LOVE 1121-14L  
LOVE 1121-15J